

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1031894

Luminaire Tested: S123DIW-B775D1320UB50-4F0-XX-W2A-D1

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1031894  
REPORT IS A COMBINATION OF REPORTS P991966 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIW-B775D1320UB50-4F0-XX-W2A-D1  
Description: Define 3 Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

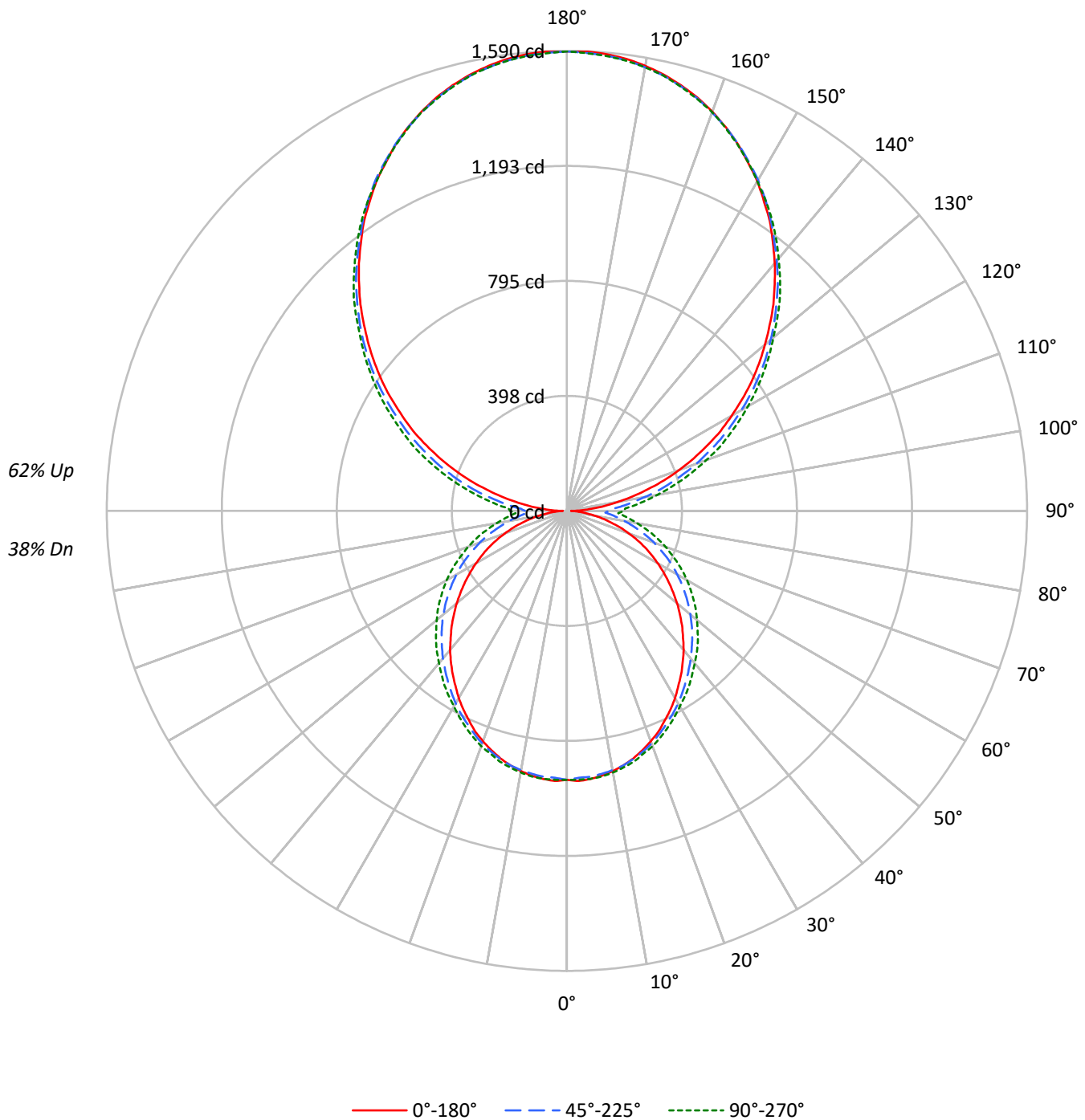
Lumens per Lamp: N/A  
Luminaire Lumens: 7527.0 lumens  
Efficiency: N/A  
Efficacy: 96.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 78  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| RF  | 20  |     |     |     | 20 |    |    |    | 20 |    |    |    | 20 |    |    |    | 20 |
| RC  | 80  |     |     |     | 70 |    |    |    | 50 |    |    |    | 30 |    |    |    | 10 |
| RW  | 70  | 50  | 30  | 10  | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 104 | 104 | 104 | 104 | 95 | 95 | 95 | 95 | 77 | 77 | 77 | 60 | 60 | 60 | 45 | 45 | 45 |
| 1   | 94  | 90  | 86  | 82  | 85 | 81 | 78 | 75 | 66 | 63 | 61 | 52 | 50 | 48 | 39 | 38 | 36 |
| 2   | 86  | 78  | 72  | 66  | 77 | 71 | 65 | 61 | 57 | 53 | 50 | 45 | 42 | 40 | 34 | 32 | 30 |
| 3   | 78  | 68  | 61  | 55  | 70 | 62 | 55 | 50 | 50 | 46 | 42 | 39 | 36 | 33 | 29 | 27 | 25 |
| 4   | 71  | 60  | 52  | 46  | 64 | 55 | 48 | 42 | 44 | 39 | 35 | 35 | 31 | 28 | 26 | 24 | 22 |
| 5   | 65  | 53  | 45  | 39  | 59 | 49 | 41 | 36 | 40 | 34 | 30 | 31 | 27 | 24 | 23 | 21 | 19 |
| 6   | 60  | 48  | 40  | 34  | 54 | 43 | 36 | 31 | 36 | 30 | 26 | 28 | 24 | 21 | 21 | 18 | 16 |
| 7   | 55  | 43  | 35  | 29  | 50 | 39 | 32 | 27 | 32 | 27 | 23 | 26 | 22 | 19 | 19 | 17 | 14 |
| 8   | 51  | 39  | 31  | 26  | 46 | 36 | 29 | 24 | 29 | 24 | 20 | 23 | 19 | 16 | 18 | 15 | 13 |
| 9   | 48  | 35  | 28  | 23  | 43 | 32 | 26 | 21 | 27 | 22 | 18 | 21 | 17 | 15 | 16 | 14 | 12 |
| 10  | 44  | 32  | 25  | 20  | 40 | 30 | 23 | 19 | 25 | 20 | 16 | 20 | 16 | 13 | 15 | 12 | 10 |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10002 | 10002 | 10002 |
| 5°  | 10030 | 9709  | 9701  |
| 10° | 9936  | 9446  | 9374  |
| 15° | 9804  | 9155  | 9027  |
| 20° | 9618  | 8832  | 8654  |
| 25° | 9388  | 8467  | 8268  |
| 30° | 9152  | 8137  | 7880  |
| 35° | 8889  | 7791  | 7564  |
| 40° | 8637  | 7475  | 7231  |
| 45° | 8358  | 7168  | 6956  |
| 50° | 8082  | 6864  | 6658  |
| 55° | 7777  | 6552  | 6384  |
| 60° | 7478  | 6234  | 6102  |
| 65° | 7170  | 5895  | 5773  |
| 70° | 6708  | 5515  | 5434  |
| 75° | 6121  | 5079  | 5083  |
| 80° | 5440  | 4642  | 4684  |
| 85° | 4764  | 4286  | 4397  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8358 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 88.2   | 1.2       |
| 10°-20°   | 251.3  | 3.3       |
| 20°-30°   | 375.8  | 5.0       |
| 30°-40°   | 448.7  | 6.0       |
| 40°-50°   | 469.4  | 6.2       |
| 50°-60°   | 440.5  | 5.9       |
| 60°-70°   | 368.0  | 4.9       |
| 70°-80°   | 263.1  | 3.5       |
| 80°-90°   | 159.9  | 2.1       |
| 90°-100°  | 200.6  | 2.7       |
| 100°-110° | 381.7  | 5.1       |
| 110°-120° | 575.1  | 7.6       |
| 120°-130° | 720.6  | 9.6       |
| 130°-140° | 791.4  | 10.5      |
| 140°-150° | 768.4  | 10.2      |
| 150°-160° | 644.8  | 8.6       |
| 160°-170° | 429.2  | 5.7       |
| 170°-180° | 150.3  | 2.0       |
| 0°-30°    | 715.2  | 9.5       |
| 0°-40°    | 1163.9 | 15.5      |
| 0°-60°    | 2073.9 | 27.6      |
| 0°-90°    | 2864.9 | 38.1      |
| 90°-120°  | 1157.4 | 15.4      |
| 90°-150°  | 3437.8 | 45.7      |
| 90°-180°  | 4662.0 | 61.9      |
| 0°-180°   | 7527.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 929  | 929   | 929  | 929   | 929  |      |
| 5°   | 930  | 928   | 922  | 930   | 929  | 88   |
| 15°  | 886  | 889   | 888  | 898   | 897  | 250  |
| 25°  | 800  | 810   | 813  | 826   | 826  | 369  |
| 35°  | 688  | 704   | 718  | 733   | 737  | 430  |
| 45°  | 563  | 587   | 612  | 632   | 640  | 434  |
| 55°  | 429  | 463   | 499  | 526   | 534  | 384  |
| 65°  | 297  | 336   | 381  | 411   | 421  | 293  |
| 75°  | 161  | 208   | 259  | 292   | 305  | 172  |
| 85°  | 50   | 100   | 154  | 188   | 198  | 51   |
| 90°  | 14   | 76    | 144  | 184   | 196  | 15   |
| 95°  | 85   | 133   | 192  | 229   | 239  | 90   |
| 105° | 289  | 316   | 370  | 399   | 410  | 309  |
| 115° | 535  | 551   | 585  | 611   | 618  | 530  |
| 125° | 779  | 783   | 810  | 826   | 828  | 695  |
| 135° | 1009 | 1015  | 1025 | 1038  | 1041 | 777  |
| 145° | 1222 | 1224  | 1228 | 1234  | 1234 | 763  |
| 155° | 1399 | 1399  | 1400 | 1405  | 1396 | 644  |
| 165° | 1523 | 1520  | 1520 | 1527  | 1518 | 430  |
| 175° | 1584 | 1580  | 1580 | 1587  | 1578 | 151  |
| 180° | 1588 | 1588  | 1588 | 1588  | 1588 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 929.2 | 929.2 | 929.2 | 929.2 | 929.2 |
| 2.5°   | 934.3 | 931.3 | 923.2 | 931.3 | 930.3 |
| 5°     | 930.3 | 928.2 | 922.2 | 930.3 | 929.2 |
| 7.5°   | 923.2 | 923.2 | 917.1 | 927.2 | 926.2 |
| 10°    | 913.1 | 915.1 | 910.0 | 920.1 | 918.1 |
| 12.5°  | 900.9 | 903.9 | 900.9 | 910.0 | 908.0 |
| 15°    | 885.7 | 888.8 | 887.7 | 897.9 | 896.9 |
| 17.5°  | 867.5 | 873.6 | 872.6 | 881.7 | 879.6 |
| 20°    | 847.3 | 853.3 | 855.4 | 864.5 | 865.5 |
| 22.5°  | 826.0 | 832.1 | 835.1 | 847.3 | 846.2 |
| 25°    | 799.7 | 809.8 | 812.8 | 826.0 | 826.0 |
| 27.5°  | 774.4 | 785.5 | 791.6 | 802.7 | 803.7 |
| 30°    | 747.0 | 760.2 | 768.3 | 780.4 | 780.4 |
| 32.5°  | 716.7 | 731.9 | 743.0 | 756.2 | 759.2 |
| 35°    | 688.3 | 704.5 | 717.7 | 732.9 | 736.9 |
| 37.5°  | 658.0 | 676.2 | 691.4 | 708.6 | 711.6 |
| 40°    | 627.6 | 645.8 | 666.1 | 683.3 | 687.3 |
| 42.5°  | 594.2 | 617.5 | 638.7 | 658.0 | 664.0 |
| 45°    | 562.8 | 587.1 | 612.4 | 631.6 | 639.7 |
| 47.5°  | 529.4 | 556.7 | 585.1 | 606.3 | 612.4 |
| 50°    | 497.0 | 525.4 | 556.7 | 580.0 | 587.1 |
| 52.5°  | 462.6 | 493.0 | 528.4 | 552.7 | 561.8 |
| 55°    | 429.2 | 462.6 | 499.0 | 526.4 | 534.5 |
| 57.5°  | 396.8 | 431.2 | 470.7 | 498.0 | 507.1 |
| 60°    | 362.4 | 398.8 | 440.3 | 468.7 | 479.8 |
| 62.5°  | 330.0 | 367.4 | 412.0 | 440.3 | 450.5 |
| 65°    | 296.6 | 336.1 | 380.6 | 411.0 | 421.1 |
| 67.5°  | 263.2 | 304.7 | 349.2 | 382.6 | 390.7 |
| 70°    | 227.8 | 271.3 | 319.9 | 352.3 | 362.4 |
| 72.5°  | 195.4 | 238.9 | 289.5 | 322.9 | 333.0 |
| 75°    | 160.9 | 208.5 | 259.1 | 292.5 | 304.7 |
| 77.5°  | 131.6 | 179.2 | 229.8 | 265.2 | 274.3 |
| 80°    | 100.2 | 149.8 | 202.5 | 236.9 | 247.0 |
| 82.5°  | 72.9  | 123.5 | 177.1 | 211.6 | 221.7 |
| 85°    | 49.6  | 100.2 | 153.9 | 188.3 | 198.4 |
| 87.5°  | 30.4  | 81.0  | 132.6 | 167.0 | 177.1 |
| 90°    | 14.4  | 76.5  | 144.3 | 183.7 | 196.3 |
| 92.5°  | 49.5  | 100.6 | 158.7 | 195.8 | 202.4 |
| 95°    | 84.7  | 132.9 | 192.5 | 228.9 | 239.0 |
| 97.5°  | 131.1 | 173.9 | 228.8 | 265.5 | 274.3 |
| 100°   | 178.8 | 218.7 | 271.5 | 304.5 | 317.1 |
| 102.5° | 233.9 | 266.0 | 320.3 | 352.3 | 361.3 |
| 105°   | 288.8 | 315.6 | 370.3 | 398.7 | 410.3 |
| 107.5° | 352.7 | 375.1 | 421.6 | 452.8 | 460.6 |
| 110°   | 411.6 | 432.3 | 475.3 | 506.6 | 512.2 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 474.0  | 489.3  | 527.8  | 559.3  | 568.4  |
| 115°   | 535.3  | 551.2  | 585.1  | 610.6  | 617.5  |
| 117.5° | 599.0  | 608.3  | 640.2  | 664.5  | 668.9  |
| 120°   | 656.5  | 669.1  | 696.2  | 718.3  | 722.9  |
| 122.5° | 717.6  | 724.7  | 753.6  | 772.1  | 775.4  |
| 125°   | 779.0  | 782.8  | 809.7  | 825.9  | 828.0  |
| 127.5° | 836.4  | 842.9  | 865.7  | 878.5  | 880.6  |
| 130°   | 893.8  | 902.8  | 919.3  | 933.5  | 930.9  |
| 132.5° | 950.2  | 960.2  | 972.9  | 984.8  | 985.7  |
| 135°   | 1008.8 | 1015.3 | 1025.2 | 1038.5 | 1041.0 |
| 137.5° | 1062.5 | 1067.7 | 1078.6 | 1088.5 | 1089.9 |
| 140°   | 1117.6 | 1123.9 | 1128.1 | 1142.1 | 1138.4 |
| 142.5° | 1168.8 | 1174.0 | 1176.5 | 1188.5 | 1187.2 |
| 145°   | 1222.4 | 1223.9 | 1227.7 | 1234.5 | 1233.5 |
| 147.5° | 1267.6 | 1272.6 | 1276.3 | 1279.3 | 1275.9 |
| 150°   | 1316.2 | 1318.7 | 1321.2 | 1321.2 | 1315.7 |
| 152.5° | 1356.2 | 1359.9 | 1361.1 | 1363.6 | 1357.4 |
| 155°   | 1398.6 | 1398.6 | 1399.8 | 1404.8 | 1396.1 |
| 157.5° | 1434.8 | 1433.5 | 1434.8 | 1439.7 | 1432.3 |
| 160°   | 1468.4 | 1465.9 | 1465.9 | 1472.2 | 1467.2 |
| 162.5° | 1498.4 | 1494.6 | 1495.9 | 1502.1 | 1493.4 |
| 165°   | 1523.3 | 1519.6 | 1519.6 | 1527.1 | 1518.3 |
| 167.5° | 1544.5 | 1539.6 | 1540.8 | 1548.3 | 1540.8 |
| 170°   | 1562.0 | 1557.0 | 1557.0 | 1565.8 | 1557.0 |
| 172.5° | 1575.7 | 1570.7 | 1570.7 | 1578.2 | 1569.5 |
| 175°   | 1584.5 | 1579.5 | 1579.5 | 1587.0 | 1578.2 |
| 177.5° | 1589.5 | 1584.5 | 1584.5 | 1592.0 | 1583.2 |
| 180°   | 1588.2 | 1588.2 | 1588.2 | 1588.2 | 1588.2 |

(END OF REPORT)